

WHAT IS CLAIMED IS:

1. A cooling system for a portable computer comprising:
 - a frame having a heat-source connecting unit in a first side and having a fan housing unit in a second side;
 - a dissipating unit on one side of the fan housing unit of the frame that is configured to perform heat exchange;
 - a dissipating fan within the fan housing unit configured to form an air stream that would pass through the dissipating unit from inside the fan housing unit; and
 - a cooling unit coupled to the first side of the frame and configured to deliver heat from the heat-source connecting unit to the dissipating unit.
2. The system as claimed in claim 1, wherein the cooling unit is a micro cooling unit configured to perform heat exchange using a cooling cycle caused by phase change.
3. The system as claimed in claim 1, wherein the cooling unit is a plate-heat pipe that covers one side of the frame.
4. The system as claimed in claim 3, wherein the plate-heat pipe is filled with a liquid.
5. The system as claimed in claim 4, wherein the cooling unit is plate-shape and approximately 1 mm thick.

6. The system as claimed in claim 1, wherein the heat source connecting unit is configured to thermally couple to a main board, and wherein when the frame is removed a processor mounted on the main board is exposed.

7. The cooling system as claimed in claim 1, wherein the frame and the cooling unit provide two heat removing paths to the dissipating unit.

8. A cooling system for use in a portable computer comprising:
a dissipating plate having a dissipating fan in its one side and having a settle-down groove in its inside;
a settle unit coupled to a lower surface inside of the settle-down groove in the dissipating plate;
a micro cooling system having a first side coupled to an upper surface of the settle unit and a second opposite side configured to face a processor, wherein the micro cooling system is configured to perform heat exchange by repeating a cooling cycle of condensation and evaporation using a capillary phenomenon to transfer heat arising from the processor.

9. The system of claim 8, wherein the dissipating plate is fastened to a main board in an inside of the portable computer.

10. The system of claim 9, wherein the dissipating plate is configured to removably provide access to a processor mounted on the main board.

11. The system of claim 10, wherein the micro cooling system is thermally coupled to the processor when the dissipating plate is fastened to the main board, and wherein the micro cooling system adjacent to the processor is an identical material.

12. The system of claim 11, wherein the dissipating plate surrounds the processor to perform radiation cooling of an enclosed space.

13. The system of claim 9, comprising a coil spring that gives elastic force to a screw joining between the dissipating plate and the main board.

14. The system of claim 8, wherein the settle unit and the micro cooling system are joined each other by brazing, and wherein a plurality of guide protuberances is formed on an outer periphery of the settle unit.

15. The system of claim 8, wherein the micro cooling unit has a plurality of guides in a liquid coolant moving blocks, wherein the guides couple a transfer region to a liquid coolant storage block and a liquid coolant condensation block.

16. A cooling system for a portable computer comprising:
a frame having a heat-source connecting unit in a first side and having a fan housing unit in a second side;
a dissipating unit on one side of the fan housing unit of the frame that is configured to perform heat exchange;
a dissipating fan with the fan housing unit configured to form an air stream that would pass through the dissipating unit from inside the fan housing unit; and
a plate-heat pipe on one side of the frame and configured to deliver heat from the heat-source connecting unit to the dissipating pin by circulating a fluid through its inside.

17. The system of claim 16, wherein the plate-heat pipe completely shields one side of the fan housing unit.

18. The system of claim 16, wherein the dissipating fan assembly is installed in a space partitioned by the fan housing unit and the plate-heat pipe and forms an air stream that collides against the plate-heat pipe and the dissipating unit.

19. The system of claim 16, wherein the frame is fastened to a main board in the portable computer, wherein the dissipating unit is thermally coupled to a processor in the main board, and wherein the frame and the plate-heat pipe are configured to provide access to the processor.

20. The system of claim 16, wherein the plate-heat pipe is approximately 1.5 mm thick.

21. A cooling system for a portable computer comprising:
a frame having a recess in a first side and having a fan housing unit in a second side;

a micro cooling system having a first side configured with a heat releasing part coupled to the recess and a second opposite side configured to include a heat absorption part, wherein the micro cooling system is configured to perform heat exchange by repeating a cooling cycle of condensation and evaporation using a capillary phenomenon to transfer heat arising from the processor.

a dissipating unit on one side of the fan housing unit of the frame that is configured to perform heat exchange;

a dissipating fan with the fan housing unit configured to form an air stream that would pass through the dissipating unit from inside the fan housing unit; and

a plate-heat pipe on one side of the frame and configured to deliver heat from the frame to the dissipating unit by circulating a fluid through its inside.